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FILE 'HOME' ENTERED AT 14:08:38 ON 17 SEP 2002

FILE 'BIOSIS, MEDLINE, INPADOC, CAPLUS' ENTERED AT 14:08:50 ON 17 SEP 2002

FILE 'REGISTRY' ENTERED AT 14:08:57 ON 17 SEP 2002
L1             1 AZADIRACHTIN/CN

FILE 'BIOSIS, MEDLINE, INPADOC, CAPLUS' ENTERED AT 14:09:25 ON 17 SEP 2002
L2          1402 L1
L3       1076817 NATURAL?
L4           147 L2 AND NATURAL?
L5           218 L2 AND EXTRACT?
L6           180 DUPLICATE REMOVE L5 (38 DUPLICATES REMOVED)
L7             0 AZADIRACHTIN AND (SAPONARIA OR QUILLAJA OR CHLOROGALUM OR SAPIN
L8          1691 AZADIRACHTIN
L9          1792 L2 OR L3
L10            8 L9 AND (SAPONIN OR SAPOGENIN)
L11            6 DUPLICATE REMOVE L10 (2 DUPLICATES REMOVED)
L12            3 L9 AND LECITHIN
L13           16 L9 AND (TRITON? OR TWEEN? OR BRIJ? OR SPAN?)
L14           11 DUPLICATE REMOVE L13 (5 DUPLICATES REMOVED)

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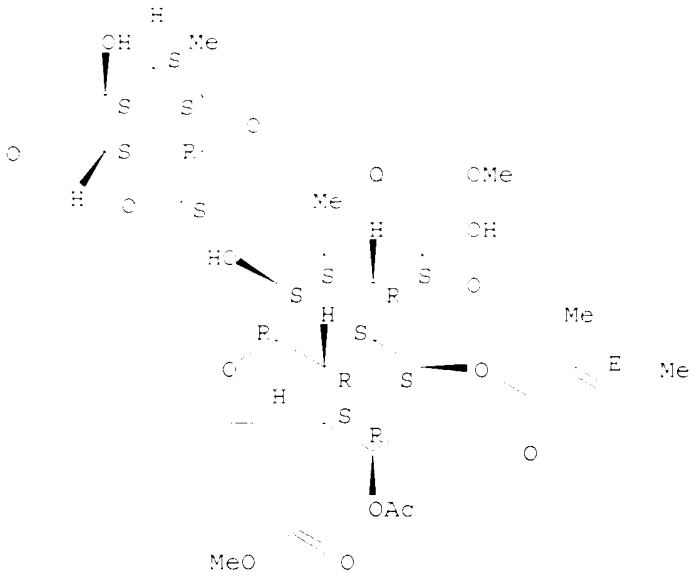
L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 11141-17-6 REGISTRY
CN 1H,7H-Naphtho[1,8-bc:4,4a-c']difuran-5,10a(8H)-dicarboxylic acid, 10-(acetyloxy)octahydro-3,5-dihydroxy-4-methyl-8-[[(2E)-2-methyl-1-oxo-2-butenyl]oxy]-4-[(1aR,2S,3aS,6aS,7S,7aS)-3a,6a,7,7a-tetrahydro-6a-hydroxy-7a-methyl-2,7-methanofuro[2,3-b]oxireno[e]oxepin-1a(2H)-yl]-, dimethyl ester, (2aR,3S,4S,4aR,5S,7aS,8S,10R,10aS,10bR)- (9CI) CA INDEX NAME
OTHER CA INDEX NAMES:
CN 1H,7H-Naphtho[1,8-bc:4,4a-c']difuran-5,10a(8H)-dicarboxylic acid, 10-(acetyloxy)octahydro-3,5-dihydroxy-4-methyl-8-[(2-methyl-1-oxo-2-butenyl)oxy]-4-(3a,6a,7,7a-tetrahydro-6a-hydroxy-7a-methyl-2,7-methanofuro[2,3-b]oxireno[e]oxepin-1a(2H)-yl)-, dimethyl ester, [2aR-[2a.alpha.,3.beta.,4.beta.(1aR*,2S*,3aS*,6aS*,7S*,7aS*),4a.beta.,5.alpha.,7aS*,8.beta.(E),10.beta.,10a.alpha.,10b.beta.]]-
CN 2,7-Metnanofuro[2,3-b]oxireno[e]oxepin, 1H,7H-naphtho[1,8-bc:4,4a-c']difuran-5,10a(8H)-dicarboxylic acid deriv.
OTHER NAMES:
CN Align
CN **Azadirachtin**
CN Azadirachtin A
CN Azatin
CN Azatin EC
CN BioNEEM
CN NeemAzal F
CN NeemAzal T
CN NeemAzal W
CN Neemazol
CN Neemgold
CN Nimbicidine
CN Suneem
CN Superneem
FS STEREOSEARCH
DR 55890-15-8, 95507-01-0, 61812-38-2
MF C35 H44 O16
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, CSCHEM, CSNB, DDFU, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, PIRA, PROMT, SPECINFO, TOXCENTER, ULIDAT, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

706 REFERENCES IN FILE CA (1967 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
707 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=>

L4 ANSWER 173 OF 180 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 32
AN 1984:291767 BIOSIS
DN BA78:18247
TI ESTIMATION OF AZADIRACHTIN CONTENT IN NEEM **EXTRACTS** AND FORMULATIONS.
AU WARTHEN J D JR; STOKES J B; JACOBSON M; POEMPEL M F
CS BIOL. ACTIVE NATURAL PRODUCTS LAB., AGRIC. ENVIRON. QUALITY INST., AGRIC. RES. SERV., U.S. DEP. AGRIC., BELTSVILLE, MD. 20705.
SO J LIQ CHROMATOGR, 1984 7 3 , 591-598.
CODEN: JLCHD8. ISSN: 0148-3919.
FS BA; OLD
LA English
AB A high performance liquid chromatographic reversed-phase procedure was developed whereby azadirachtin content can be estimated in crude **extracts** of neem [Azadirachta indica] and in dust formulations of neem. An estimation of the azadirachtin content is achieved through the use of an external azadirachtin standard and valley-to-valley integration. Since azadirachtin seems to be the most potent insect feeding deterrent in these **extracts** and formulations, its content is a measurement of potency and represents an attempt at standardization.

L6 ANSWER 166 OF 181 BIOSIS COPYRIGHT 2012 BIOLOGICAL ABSTRACTS INC.
AN 1986:23658 BIOSIS
DN BR30:23658
TI STABLE ANTI-PEST NEEM SEED **EXTRACT**.
AU LARSON P O
CS SHEBOYGAN, WIS., USA.
ASSIGNEE: TIKWOOD, LTD
PI US 4556562 03 Dec 1985
SO Off. Gaz. U. S. Pat. Trademark Off., Pat., 1985 1061 1 , 265.
CODEN: OGUPET. ISSN: 0098-1133.
DT Patent
FS BR; OLD
LA English

L6 ANSWER 155 OF 180 CAPLUS COPYRIGHT 2002 ACS
AN 1989:492333 CAPLUS
DN 111:92333
TI Insecticidal hydrogenated neem **extracts**
IN Lidert, Zev
PA Rohm and Haas Co., USA
SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 311284	A2	19890412	EP 1988-308934	19880927
	EP 311284	A3	19901031		
	EP 311284	B1	19940406		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
	US 4943434	A	19900724	US 1988-240790	19880902
	CA 1310494	A1	19920512	CA 1988-578113	19880922
	AT 103767	E	19940415	AT 1988-308934	19880927
	ES 2063047	T3	19950101	ES 1988-308934	19880927
	BR 8805127	A	19890516	BR 1988-5127	19881005
	JP 01163193	A2	19890627	JP 1988-251708	19881005
	JP 2665206	B2	19971008		
	AU 609526	B2	19910502	AU 1988-23446	19881005
	IL 87930	A1	19920719	IL 1988-87930	19881005
	IN 173449	A	19940507	IN 1988-DE1002	19881117
PRAI	US 1987-106755		19871006		
	US 1988-240790		19880902		
	EP 1988-308934		19880927		

AB Exts. of neem tree (Azadirachta indica) are hydrogenated to give hydrogenated azadirachtin, an insecticide. Ethanolic neem and seed ext. was partitioned between 1:1 MeOH-hexane and the MeOH phase was sepd. and the solvent evapd. The residue was partitioned between water and EtOH and the org. phase was sepd. and the solvent evapd. The residue was dissolved in MeOH and hydrogenated over Pd/C to give a product, which was more insecticidal to Spodoptera eridinia in lab. feeding tests, using lima bean leaves, than was the nonhydrogenated ext.

L6 ANSWER 156 OF 180 BIOSIS COPYRIGHT 2002 BIOLOGI

L6 ANSWER 145 OF 181 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:187461 BIOSIS
DN BA93:98411
TI POTENTIAL OF MARGOSAN O AN AZADIRACHTIN CONTAINING FORMULATION FROM NEEM SEED **EXTRACT** AS A CONTROL AGENT FOR SPRUCE BUDWORM CHORISTONEURA-FUMIFERANA.
AU THOMAS A W; STRUNZ G M; CHIASSON M; CHAN T H
CS FORESTRY CANADA MARITIMES REGION, P.O. BOX 4000, FREDERICTON, N.B. E3B 5P7, CAN.
SO ENTOMOL EXP APPL, (1992) 62 (1), 37-46.
CODEN: ETEAAT. ISSN: 0013-8703.
FS BA; OLD
LA English
AB The effects on spruce budworm larvae, Choristoneura fumiferana (Clem.), produced by ingestion of Margosan-O, a commercially available neem seed **extract** formulation containing 0.3% azadirachtin, were investigated. Bioassays with the test material were conducted using various instars of spruce budworm larvae, with either artificial diet, cut branches of balsam fir, Abies balsamea (L.) Mill., or small growing balsam fir trees as substrates. The dose-response data on feeding reduction, developmental retardation, and mortality (LC50, LC95, and LD50) suggest that Margosan-O has promise as a control agent for spruce budworm in an integrated pest management program.

ANSWER 140 OF 180 CAPLUS COPYRIGHT 2002 ACS

AN 1993:75393 CAPLUS

DN 118:75393

TI Pesticidal insect repellent from neem seed **extract**

IN Guerrini, Vincent Henry

PA Australia

SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9219616	A1	19921112	WO 1992-AU200	19920501
	W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US				
	RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
	AU 9217409	A1	19921221	AU 1992-17409	19920501
PRAI	AU 1991-5970		19910506		
	WO 1992-AU200		19920501		

AB A mixt. of 10-350 mL citronella oil, 40-600 mL neem seed ext. (5% azadirachtin content), 0.17-1.16 g triclosan, 30-200 g DEET, 6-46 g di-Pr isocinchomerate, traces of lemon grass oil, and EtOH to 1 L was heated at 54.degree. for 14 days to give a pesticide/insect repellent. During heating, azadirachtin disappeared and new compds. were formed. The compn. comprises i.a. nimbin, nimbinin, meliantriol, azadirachtol, and salannins.

L6 ANSWER 139 OF 180 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 26
AN 1993:318495 BIOSIS
DN PREV199396026845
TI Biological activity of neem seed kernel **extracts** and synthetic azadirachtin against larvae of Plutella xylostella L.
AU Verkerk, Robert H. J.; Wright, Denis J. 1
CS 1 Dep. Biol., Imperial Coll. Silwood Park, Ascot, Berkshire SL5 7PY UK
SO Pesticide Science, 1993 Vol. 37, No. 1, pp. 83-91.
ISSN: 0031-613X.
DT Article
LA English
AB The activity of two neem **extracts**, AZT and NEEM-AZAL (containing 30 and 3 mg azadirachtin ml-1 respectively) and synthetic azadirachtin (AZ) against second-instar larvae (L2) of Plutella xylostella L. was examined using leaf-dip bioassays. On Chinese cabbage, AZ was significantly (P lt 0.05) less toxic (3 to 4-fold ; LC-50 0.54 mu-g AZ ml-1) than either neem **extract** against a laboratory strain of P. xylostella (FS). The LC-50 values for AZT against the FS and another laboratory strain (Wellcome) were not significantly different on Chinese cabbage. The activity of AZT against the FS and Wellcome strains was similar on Chinese cabbage and Brussels sprout. AZT was significantly less toxic (3-fold) on Brussels sprout against an acylurea-resistant field strain (Sawi) when compared with the FS strain on Chinese cabbage. Larval mortality (at day 13) was found to increase with increasing exposure time of P. xylostella (FS) larvae to AZT-treated Chinese cabbage, although there was little difference in mortality between 48 and 120 h exposure. When AZT, NEEM-AZAL and AZ were applied at a dose (1 mu-g AZ ml-1) which gave end-point mortalities between 50 and 90% (at day 13), all treatments delayed the development of a proportion of surviving larvae but no morphogenetic abnormalities were observed in larvae which reached pupation. Evidence for antifeedant (reduced weight gain) and repellant effects (choice-chamber) for AZT were observed with L2 P. xylostella (Wellcome) on Chinese cabbage. AZT was also shown to have ovicidal activity against P. xylostella (Wellcome) at relatively high dose ranges (10-1000 mu-g AZ ml-1) as well as some contact activity (FS strain) in topical bioassays. In residual bioassays on glass with adults of the hymenopteran endo-larval parasitoid of P. xylostella, Diadegma semiclausum (Ichneumonidae), AZT showed little or no activity at rates up to 1000 mu-g AZ ml-1. In medium-volume (MV, 200 litre ha-1) and ultra-low-volume (c. 1 litre ha-1) spray bioassays on Brussels sprout, AZT gave 16-92% and 89-100% mortality respectively (Wellcome strain) at rates approximating to 1-20 g AZ ha-1. The residual activity of AZT and NEEM-AZAL against P. xylostella (FS) on Brussels sprout (MV spray) was observed to decrease appreciably after three days, the decline in activity being particularly marked for NEEM-AZAL.

L6 ANSWER 140 OF 180 CAPLUS COPYRIG

ANSWER 119 OF 180 CAPLUS COPYRIGHT 2002 ACS

AN 1994:156744 CAPLUS

DN 120:156744

TI Stable **extracts** from neem seeds.

IN Lidert, Zev

PA Rohm and Haas Co., USA

SO Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 581467	A1	19940202	EP 1993-305398	19930709
	EP 581467	B1	19960904		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5391779	A	19950221	US 1992-920237	19920727
	JP 06166628	A2	19940614	JP 1993-183528	19930625
	JP 3283340	B2	20020520		
	AT 142078	E	19960915	AT 1993-305398	19930709
	ES 2091556	T3	19961101	ES 1993-305398	19930709
	CA 2100536	AA	19940128	CA 1993-2100536	19930714
	IL 106333	A1	19970318	IL 1993-106333	19930714
	AU 9341983	A1	19940203	AU 1993-41983	19930715
	AU 674855	B2	19970116		
	ZA 9305227	A	19940308	ZA 1993-5227	19930720
	BR 9302980	A	19940315	BR 1993-2980	19930723
	HU 69146	A2	19950828	HU 1993-2159	19930726
	HU 215786	B	19990201		
	CN 1084354	A	19940330	CN 1993-109144	19930727
	CN 1041889	B	19990203		
PRAI	US 1992-920237	A	19920727		

AB A stable azadirachtin ext. is prepd. by dissoln. of the crude neem seed ext. in a polar solvent and removal of impurities by pptn. and/or treatment of the ext. with an oxidizing agent. The resulting stable ext., optionally formulated as a wettable powder, is a foliar insecticide. Deoiled neem cake (1,400 kg) was extd. with 7,000 kg MeOH, and the ext. was concd. to 366 kg. The conc. was treated with 596 kg water, filtered, and the filtrate was dild. with 1,080 kg brine and extd. with 571.5 kg Et acetate. The extn. was repeated with 202 kg Et acetate and the combined Et acetate phases were evapd. to give 31 kg conc. This was treated with 27 kg satd. Na2CO3 soln. contg. 5.4 kg 35% H2O2, followed by heating at 55.degree. and phase sepn., to give 12.8 kg ext. contg. 31% azadirachtin.

L6 ANSWER 120 OF 180 BIOS

Lidert, Zev; Clovis, James Stanley; Overberger, Craig Gilbert
PA Rohm and Haas Co., USA
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 581469	A1	19940202	EP 1993-305400	19930709
	EP 581469	B1	19960904		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5420318	A	19950530	US 1992-920238	19920727
	JP 06157211	A2	19940603	JP 1993-157623	19930628
	AT 141079	E	19960915	AT 1993-305400	19930709
	ES 2091587	T3	19961101	ES 1993-305400	19930709
	CA 2100535	AA	19940128	CA 1993-2100535	19930714
	IL 106334	A1	19971218	IL 1993-106334	19930714
	AU 9341984	A1	19940203	AU 1993-41984	19930715
	AU 674856	B2	19970116		
	ZA 9305229	A	19940221	ZA 1993-5229	19930720
	BR 9302961	A	19940216	BR 1993-2961	19930723
	HU 69148	A2	19950828	HU 1993-2161	19930726
	HU 215780	B	19990201		
	CN 1082051	A	19940216	CN 1993-109025	19930727
	CN 1033328	B	19961120		
PRAI	US 1992-920238		19920727		

AB High purity azadirachtin prepns. are obtained by adsorbing aq. solns. of neem seed exts. onto a macroporous polymeric adsorbent, followed by desorption using a solvent. The resulting prepn., optionally formulated, is a foliar insecticide. An aq. neem seed ext. was passed through an Amberlite XAD-16 column. The column was eluted with Et acetate, the eluate treated with a satd. $NaHCO_3$ soln. and with a small amt. of H_2O_2, at 55.degree.. The org. phase was sepd., dried, and filtered. Et acetate was stripped, to give an ext. contg. 40% azadirachtin.

L6 ANSWER 119 OF 180 CAPLUS COPYRIGHT 2002 ACS

L6 ANSWER 117 OF 180 CAPLUS COPYRIGHT 2002 ACS
AN 1995:220439 CAPLUS
DN 122:12514
TI Solvents for co-**extraction** of azadirachtin and neem oil
IN Roland, Michael Timothy; Blouin, John Joseph
PA W.R. Grace and Co.-Conn., USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 617119	A2	19940928	EP 1994-250070	19940317
	EP 617119	A3	19951102		
	EP 617119	B1	20000823		
	R: BE, DE, ES, FR, GB, IT, NL				
	US 5397571	A	19950314	US 1993-36795	19930325
	AU 9456335	A1	19940929	AU 1994-56335	19940224
	AU 677621	B2	19970501		
	ES 2150468	T3	20001201	ES 1994-250070	19940317
	JP 06298614	A2	19941025	JP 1994-71887	19940318
	US 5503837	A	19960402	US 1994-311379	19940923
PRAI	US 1993-36795	A	19930325		

AB A mixt. of polar and nonpolar solvents (e.g., 65:35 EtOH-hexane mixt.) is used for the simultaneous extn. of a hydrophilic fraction contg. azadirachtin and hydrophobic neem oil from seeds.

L6 ANSWER 118 OF 180 CAPLUS COPYRIGHT 2002 ACS
AN 1994:156728 CAPLUS
DN 120:156728
TI High-purity neem seed **extracts**.
IN Lidert, Zev; Clovis, James Stanley; Overberger, Craig Gilbert
PA Rohm and Haas Co., USA
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 581469	A1	19940202	EP 1993-305401	19930709
	EP 581469	B1	19960904		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	US 5420318	A	19950530	US 1992-921239	19920727
	JP 06157211	A2	19940603	JP 1993-197623	19930628
	AT 142079	E	19960915	AT 1993-305400	19930709
	ES 2091587	T3	19961101	ES 1993-305400	19930709
	CA 2100535	AA	19940128	CA 1993-2100535	19930714
	IL 106334	A1	19970318	IL 1993-106334	19930714
	AU 9341984	A1	19940203	AU 1993-41984	19930715
	AU 674854	B2	19970116		
	ZA 9305229	A	19940221	ZA 1993-5229	19930720
	BR 9302991	A	19940216	BR 1993-2981	19930723
	HU 69148	A2	19950828	HU 1993-2161	19930726
	HU 215781	B	19990201		
	CN 1082061	A	19940216	CN 1993-109025	19930727
	CN 1033328	B	19961120		
PRAI	US 1992-921239		19920727		

AB High purity azadirachtin prepns. are obtained by adsorbing aq. solns. of neem seed exts. onto a macroporous polymeric adsorbent, followed by desorption using a solvent. The resulting prepn., optionally formulated, is a foliar insecticide. An aq. neem seed ext. was passed through an

Amberlite XAD-16 column. The column was eluted with Et acetate, the eluate treated with a satd. NaHCO3 soln. and with a small amt. of HCO2, at 55.degree.. The org. phase was sepd., dried, and filtered. Et acetate was stripped, to give an ext. contg. 41% azadirachtin.

L6 ANSWER 119 OF 180 CAPLUS COPYRIGHT 2002 ACS

L6 ANSWER 110 OF 180 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:407168 BIOSIS
DN PREV199598401468
TI Repellency and toxicity of azadirachtin and neem concentrates to three stored-product beetles.
AU Xie, Y. S.; Fields, P. G. [1]; Isman, M. B.
CS [1] Winnipeg Res. Cent., Agric. Agri-Food Canada, 195 Dafoe Road, Winnipeg, MB R3T 2M9 Canada
SO Journal of Economic Entomology, 1995 Vol. 88, No. 4, pp. 1024 1031. ISSN: 0022 0493.
DT Article
LA English
AB Repellency and toxicity of azadirachtin (98% AZA, which contains 98% azadirachtin) and 3 neem **extracts** (48, 23, and 7% AZA) to 3 stored-product insects, the rusty grain beetle, Cryptolestes ferrugineus (Stephens), the rice weevil, Sitophilus oryzae (L.), and the red flour beetle, Tribolium castaneum (Herbst), were investigated in the laboratory. Each test material repelled all 3 species in a standard repellency test using a food preference apparatus. Significant negative correlations were found between insect settling response and **extract** concentrations. C. castaneum was more sensitive to the repellent action of neem than the other 2 species. The test materials were also toxic to the 3 pest species, with C. ferrugineus being the most susceptible. Six-week LC-50 values for 48, 23, and 7% AZA for C. ferrugineus were 18.8, 37.0, and 127.3 ppm, respectively. The F-1 adults of all 3 insect species in almost all treatments were significantly reduced compared with controls. This reduction was significantly dose dependent. The relationship between bioactivity of neem materials and their azadirachtin content was established and is discussed. We confirmed that azadirachtin was largely responsible for both repellent (behavioral) and toxic (physiological) actions of neem on stored-product insects. However, the neem **extracts** are slightly more active than pure azadirachtin when applied at equivalent azadirachtin concentrations, indicating that azadirachtin is not the only active compound in neem.

L6 ANSWER 111 OF 180 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACT

L11 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2002:14701 CAPLUS
DN 136:33338
TI Preparation of insecticide from plant
IN Miao, Zhendong
PA Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1296753	A	20010530	CN 2000-113939	20000930

AB The raw material of the insecticide comprises **azadirachtin** 0.1-90, oxidized matrine 0.1-98, matrine 0.1-98, other plant ext. (tea **saponin**) 0-50, and addnl. adjuvant to 100%. The insecticide is prepd. by extg. plant part, filtering, and mixing. The insecticide can prepd. into different formulations, such as emulsion, suspension, wettable powder, etc. The insecticide is low in toxicity and highly effective.

L12 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1996:436087 BIOSIS
DN PREV199699149693
TI Photostabilization of the botanical insecticide **azadirachtin** in the presence of **lecithin** as UV protectant.
AU Sundaram, K. M. S.; Curry, J.
CS Nat. Resources Canada, Canadian Forest Serv., 1219 Queen St. E., PO Box 490, Sault Ste. Marie, ON P6A 5M7 Canada
SO Journal of Environmental Science and Health Part B Pesticides Food Contaminants and Agricultural Wastes, 1996 Vol. 31, No. 5, pp. 1041-1061.
ISSN: 0360-1234.
DT Article
LA English
AB The phytochemical insecticide, **azadirachtin** (AZ), undergoes UV-induced photodegradation. Using the isomer AZ-A as a standard, its photochemical stability was studied with and without adding **lecithin** surfactant as a UV protectant. Standard solutions of pure AZ-A and Margosan-O were prepared in methanol-hexane with (AZ-A: **lecithin**, 1:2 by weight) and without **lecithin**, applied separately onto glass plates and maple (Acer L.) foliage and exposed to radiant energy under controlled conditions. Noticeable photostabilization of AZ-A was achieved in the samples containing **lecithin** compared to AZ-A samples without the **lecithin** additive. First-order kinetic evaluation of the data showed that the DT-50 (half-life) and C (rate constant) values for AZ-A with and without **lecithin** on glass plates were 5.68 d and 0.122, and 5.42 d and 0.128, respectively. The corresponding values for the Margosan-O formulation were 7.37 d and 0.094, and 6.24 d and 0.111. The DT-50 and C values for the pure AZ-A on maple foliage with and without **lecithin** were 8.77 d and 0.079, and 6.54 d and 0.106, respectively. The corresponding values for the Margosan-O formulation on foliage were 8.35 d and 0.083, and 7.45 d and 0.093. The kinetic data gave quantitative information regarding the photostabilization of AZ-A in the presence of **lecithin**. Good UV protection can only be achieved if the additive has the matching lambda-max of AZ-A. The mechanism of photostabilization of AZ-A in the presence of **lecithin** was due to either energy transfer from the excited AZ-A to **lecithin** and/or competitive absorption of UV photons by the latter.

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1996:522895 CAPLUS
DN 125:214761
TI Photostabilization of the botanical insecticide **azadirachtin** in the presence of lectin as UV protectant
AU Sundaram, K. M. S.; Curry, J.
CS Natural Res. Canada, Canadian Forest Service, Sault Ste. Marie, ON, P6A 5M7, Can.
SO Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants, and Agricultural Wastes (1996), B31(5), 1041-1060
CODEN: JPPCD2; ISSN: 0360-1234
PB Dekker
DT Journal
LA English
AB The phytochem. insecticide, **azadirachtin** (AZ), undergoes UV-induced photodegrdn. Using the isomer AZ-A as a std., its photochem. stability was studied with and without adding **lecithin** surfactant as a UV protectant. Std. solns. of pure AZ A and Margosan O were prepd. in methanol hexane with (AZ-A:lectin, 1:2 by wt.) and without **lecithin**, applied sep. onto glass plates and maple (Acer L.) foliage and exposed to radiant energy under controlled conditions. Noticeable photostabilization of AZ A was achieved in the samples contg. **lecithin** compared to AZ A samples without the **lecithin**

additive. First-order kinetic evaluation of the data showed that the DT50 (half-life) and C (rate const.) values for AZ-A with and without **lecithin** on glass plates were 5.68 d and 0.122, and 5.40 d and 0.128, resp. The corresponding values for the Margosan-O formulation were 7.37 d and 0.094, and 6.24 d and 0.111. The DT50 and C values for the pure AZ-A on maple foliage with and without **lecithin** were 8.77 d and 0.079, and 6.54 d and 0.106, resp. The corresponding values for the Margosan-O formulation on foliage were 8.35 d and 0.083, and 7.45 d and 0.093. The kinetic data gave quant. information regarding the photostabilization of AZ-A in the presence of **lecithin**. Good UV protection can only be achieved if the additive had the matching .lambda.max of AZ-A. The mechanism of photostabilization of AZ-A in the presence of **lecithin** was due to either energy transfer from the excited AZ-A to **lecithin** and/or competitive absorption of UV photons by the latter.

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1991:614831 CAPLUS
DN 115:214831
TI Lipospheres for controlled delivery of pharmaceuticals, pesticides, and fertilizers
IN Domb, Abraham J.; Maniar, Manoj
PA Nova Pharmaceutical Corp., USA
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9107171	A1	19910530	WO 1990-US6519	19901108
	W: AU, CA, FI, JP, KR, NO				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	CA 2068216	AA	19910514	CA 1990-2068216	19901108
	CA 2068216	C	19990413		
	AU 9169501	A1	19910613	AU 1991-69500	19901108
	AU 655162	B2	19941208		
	EP 502119	A1	19920909	EP 1991-901106	19901108
	EP 502119	B1	19960131		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 133562	E	19960215	AT 1991-901106	19901108
	ES 2085465	T3	19960601	ES 1991-901106	19901108
	ZA 9009088	A	19910731	ZA 1990-9088	19901113
	US 5188837	A	19930223	US 1991-770706	19911003
	JP 05505338	T2	19930812	JP 1991-501460	19911219
	JP 3233402	B2	20011126		
	US 5227165	A	19930713	US 1992-826218	19920122
	US 5221535	A	19930622	US 1992-826215	19920123
	US 5340588	A	19940823	US 1992-825287	19920123
PRAI	US 1989-435546	A	19891113		
	US 1990-607542	B1	19901108		
	US 1990-607543	B1	19901108		
	WO 1990-US6519	A	19901108		

AB Solid, water-insol. lipospheres are prepd. which contain drugs such as vaccines and anesthetics, also other biol. active agents such as insecticides and repellents, fertilizers, and pesticides. The controlled-release lipospheres have several advantages. They include emulsions, vesicles, which are stable for an extended period. A mixt. of lidocaine, tristearin and **lecithin** with a buffer soln. was shaken vigorously, immediately cooled, and immersed in a dry ice acetone bath to give lipospheres contg. lidocaine. The wide uses of the lipospheres are shown.

L14 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2002 ACS
AN 1994:156745 CAPLUS
DN 120:156745
TI Storage-stable high-**azadirachtin** solution.
IN Walter, James F.
PA Grace, W. R., and Co., USA
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5281618	A	19940125	US 1992-948195	19920921
	AU 9344694	A1	19940331	AU 1993-44694	19930818
	AU 671286	B2	19960822		
	CA 2104483	AA	19940322	CA 1993-2104483	19930820
	EP 589547	A1	19940330	EP 1993-250249	19930913
	R: BE, DE, DK, ES, FR, GB, IT, NL, PT, SE				
	JP 06199617	A2	19940719	JP 1993-252159	19930916
PRAI	US 1992-948195		19920921		

AB Storage-stable compns. comprise neem seed exts., which contain **azadirachtin** (I) pesticide. The compns. comprise nondegrading solvent systems and >10 g I/L.. The solvent systems comprise >50% by vol. aprotic solvents or alcs. and <15% water. Neem seeds (300 lb) were deoiled with 2,000 lb hexane, and I was extd. from the residue with Et acetate. Solvent evapn. gave a concn. contg. 8% I, which was formulated with PABA 1, **Tween** 20, Pr acetate 32, and Me Et ketone 3%.

L14 ANSWER 9 OF 11 BIOSIS COPYRIGHT 20

ANSWER 7 OF 11 BIOSIS COPYRIGHT 2000 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4

AN 1996:330859 BIOSIS
DN PREV199699053215
TI A method to test compounds for feeding deterrence towards redlegged earth mite (Acarina: Penthaleidae.
AU Ridsdill-Smith, T. J. [1]; Jiang, Y.; Ghisalberti, E. L.
CS [1] CSIRO Div. Entomol., Private Bag, Wembley, WA 6014 Australia
SO Annals of Applied Biology, (1995) Vol. 127, No. 3, pp. 593-600. ISSN: 0003-4746.
DT Article
LA English
AB A bioassay, based on a membrane sachet technique, has been developed to identify antifeeding compounds affecting the redlegged earth mite, Halotydeus destructor (Acari: Penthaleidae). The method consists of counting H. destructor numbers on membrane sachets in choice experiments, which was quicker and more efficient than weighing the mites. Five per cent aqueous glucose solution was used as a feeding stimulant, with **Tween** 80 at 5% concentration as a solubilizing agent for water-insoluble compounds. (+)-Catechin, rutin, biochanin A, formononetin, chlorogenic acid, and gramine acted as feeding deterrents at 1% concentration. Quercetin (1%) and **azadirachtin** (100 ppm) had no significant effect. At lower concentrations (0.01%), compounds showed antifeeding (gramine), phagostimulating (quercetin and chlorogenic acid), or no effects on mite numbers. Dose-dependent deterrent effects of plant extracts were demonstrated with the bioassay, which could be used for other mites.

L14 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
AN 1999:87303 BIOSIS
DN PREV199900087303
TI Enhanced secretion of **azadirachtin** by permeabilized margosa (Azadirachta indica) cells.
AU Kuruvilla, T.; Komaraiah, P.; Ramakrishna, S. V. [1]
CS [1] Biochemical Environ. Engineering Lab., Indian Inst. Chemical Technology, Hyderabad 500 007 India
SO Indian Journal of Experimental Biology, Jan., 1999 Vol. 37, No. 1, pp. 89-91.
ISSN: 0019-5189.
DT Article
LA English
AB Role of permeabilizing agents on secretion of **Azadirachtin** from margosa callus cultures was investigated under laboratory conditions. The results indicated that most of the synthesised **azadirachtin** remains inside the cells. Different permeabilizers showed variation in secretion pattern. The most effective was found to be **Triton** X-100, which secreted 10 mg/l at 150 ppm level followed by DMSO and chitosan. This is the first report of its nature on permeabilizing agent induced enhanced secretion of **azadirachtin** from neem callus cultures.

L14 ANSWER 6 OF 11 BIOSIS COPYRIGHT 2002 BIO